# Python Math Functions with Examples

## 1. Basic Math Functions

Square Root (`math.sqrt`):

Example:  
import math  
number = 16  
result = math.sqrt(number)  
print("Square root of 16:", result)

Power (`math.pow`):

Example:  
base = 2  
exponent = 3  
result = math.pow(base, exponent)  
print("2 raised to the power 3:", result)

Absolute Value (`abs`):

Example:  
number = -7  
result = abs(number)  
print("Absolute value of -7:", result)

## 2. Trigonometric Functions

Sine (`math.sin`):

Example:  
import math  
angle = math.radians(30)  
result = math.sin(angle)  
print("Sine of 30 degrees:", result)

Cosine (`math.cos`):

Example:  
angle = math.radians(60)  
result = math.cos(angle)  
print("Cosine of 60 degrees:", result)

Tangent (`math.tan`):

Example:  
angle = math.radians(45)  
result = math.tan(angle)  
print("Tangent of 45 degrees:", result)

## 3. Logarithmic Functions

Natural Logarithm (`math.log`):

Example:  
number = 10  
result = math.log(number)  
print("Natural logarithm of 10:", result)

Logarithm with Base 10 (`math.log10`):

Example:  
result = math.log10(100)  
print("Logarithm base 10 of 100:", result)

## 4. Constants

Value of Pi (`math.pi`):

Example:  
import math  
print("Value of Pi:", math.pi)

Value of Euler's Number (`math.e`):

Example:  
print("Value of Euler's number (e):", math.e)

## 5. Rounding Functions

Ceiling (`math.ceil`):

Example:  
number = 4.2  
result = math.ceil(number)  
print("Ceiling of 4.2:", result)

Floor (`math.floor`):

Example:  
number = 4.8  
result = math.floor(number)  
print("Floor of 4.8:", result)

## 6. Factorial

Factorial (`math.factorial`):

Example:  
number = 5  
result = math.factorial(number)  
print("Factorial of 5:", result)

## 7. GCD (Greatest Common Divisor)

GCD (`math.gcd`):

Example:  
result = math.gcd(24, 36)  
print("GCD of 24 and 36:", result)